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ABSTRACT

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Environmentally acceptable or regulatory compliant oil-based drilling fluids and methods of using same in drilling a wellbore in a subterranean formation are disclosed. The fluids are able to meet environmental regulations while maintaining acceptable oil mud rheology and overall oil mud performance. The fluids are comprised of an invert emulsion. The base or continuous phase of the emulsion is comprised of esters blended with isomerized olefins, and/or other hydrocarbons, such as paraffins, mineral oils or glyceride triesters or combinations thereof. Alternatively, the emulsion has as a base comprising isomerized olefins blended with other hydrocarbons such as linear alpha olefins, paraffins or naphthenes.

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